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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,505	06/04/2001	Hongjie Cao	1928.PC	4692

7590 03/10/2004
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EXAMINER

YU, GINA C

ART UNIT PAPER NUMBER

1617

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/873,505

Applicant(s)

CAO ET AL.

Examiner

Gina C. Yu

Art Unit

1617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 26-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 26-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 17, 2003 has been entered.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

1. Claims 32-35, 39-42, and 46-48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eskins et al. (US 5676994) ("Eskins") in view of Van Soest (US 6340527 B1), Fletcher et al. (U.S. Pat. No. 6,261,543 B1) ("Fletcher"), and Goldemberg (SCC Seminar, Drug & Cosmetic Industry, 1996).

Claimed invention is a surfactant-free aqueous composition comprising "cationic starch encapsulated hydrophobic material" containing an active ingredient. The starch encapsulated hydrophobic material is said to be non-separable.

Eskins teaches non-separable starch-oil compositions useful for food, agriculture, or pharmaceutical and cosmetic carriers or vehicles, which meets the "starch encapsulated hydrophobic material" limitation. See col. 13, lines 55 – 63; col. 11, lines 60-66; instant claims 32, 39, 46. The abstract teaches that the composition is prepared

in the absence of external emulsifying or dispersing agents. The reference teaches "the presence of the oil component in [the starch-water-oil] composition causes them to function as emulsifying and dispersing agents and makes them receptive to the addition of a variety of water-immiscible materials, for example, additional lipid, volatile, and essential oils and food flavoring materials, antioxidants, medicinal agents, agricultural chemicals". See col. 5, lines 40 – 53. The application of the starch-encapsulated actives in cosmetic formulations includes body and hand lotions, cream, and suntan lotion. Examples also illustrate encapsulating soybean oil. See instant claims 39 and 47. Example 13 teaches a dispersion of 300 g of soybean oil in 3 liters of water, which constitutes 10 % by weight. See instant claims 35, and 42. The method of topically applying the topical composition is an obvious use of the composition. See instant claims 46-48.

It is noted that claims 34, 41 and 48 are product-by-process claims, where only the limitation to the composition itself is given patentable weight. See MPEP § 2113. Eskins nonetheless teaches that the invention is prepared by jet cooking the starch. See col. 8, line 64 – col. 13, line 21.

Eskins fails to teach cationic starch.

Van Soest teaches that cationic starch is well known encapsulating material for hydrophobic or water insoluble solid active ingredients. See col. 1, line 36 – col. 2, line 11.

Fletcher et al. teach viscous antiperspirant aqueous emulsions comprising amphoteric or cationic modified starch. See abstract; col. 1, line 7 – col. 35; col. 7, lines

Art Unit: 1617

6 – 30. The reference teaches that the compositions exhibit excellent phase stability even in the high concentrated antiperspirant salts in the solution and elevated storage temperature. See col. 2, line 53 - col. 19, line 22.

Goldemberg teaches that it is well known in cosmetic art ~~to~~ to employ cationic modified starch to entrap and stabilize antioxidants in a cosmetic composition. See page 2, 6th full par.

Given the teaching of starch encapsulants for cosmetic ingredients in Eskins, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have looked to the prior arts such as an Soest, Fletcher, and Goldemberg for specific type of starch and used cationic starch as motivated by the teachings of these references because of the expectation of successfully producing a stable cosmetic composition.

2. Claims 26-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eskins, Van Soest, Fletcher, and Goldemberg as applied to claims 32-35, 39-42, and 46-48 above, and further in view of Macaulay (US 6362146 B1).

The combined references fail to teach sunscreen active ingredients.

Macaulay teaches that encapsulated sunscreens are known in the art. See col. 6, lines 4 – 25. The reference further teaches a water-based cleansing composition comprising 2, 5, and 10% of the encapsulated sunscreen actives. See Example 1; instant claims 27 and 42.

Given the teaching of the cosmetic application of the starch-encapsulated active ingredients in Eskins, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to have added sunscreen actives in the active ingredients, as motivated by Macaulay, because of the expectation of successfully producing controlled-release sunscreen compositions.

3. Claims 29-31 and 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eskins, Soest, Fletcher, Goldemberg, and Macaulay as applied to claims 26-28, 39-42, and 46-48 above, and further in view of Ashley ("Sunburn and Sunscreen Preparations", Poucher's Perfumes, Cosmetics, and Soaps) .

The combined references fail to teach the water content in the cosmetic compositions as required by the instant claims.

Ashley teaches various formulations for sunscreen and suntan preparation. See p. 434 – p. 437. Formula 4 and 6 shows cream composition having about 40 and 20 % of water by weight, respectively.

While there is no explicit teaching of using only 10 % of water as in instant claims 29 and 43, it must be noted that differences in concentration generally will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such concentration is critical. See MPEP § 2144.05. Since the general conditions of the instant claims are disclosed in Ashley, examiner views that one having ordinary skill in the art would have discovered the optimum or workable ranges by routine experimentation.

Given the general teaching of sunscreen composition in the combined references, the skilled artisan would have been further motivated to look to the prior art such as Ashley for examples of the conventional sunscreen formulations.

Response to Arguments

Applicant's arguments with respect to claims 26-48 have been considered but are moot in view of the new ground(s) of rejection in part and unpersuasive in part.

Applicants' argument that the previously rejection fail to address the limitation that the claimed composition is surfactant-free, is moot in view of the new grounds of rejection.

Applicants' argument that the references fail to provide motivation to use cationic starch is unpersuasive. Soest and Fletcher clearly indicate that using cationic starch is conventional in cosmetic art. Fletcher specifically teaches that an antiperspirant composition using cationic starch results in stabilization of the composition. Examiner views that list of only several other choices of starches in Soest is not an exhaustive or laundry list of alternatives. Nevertheless, examiner further cited the Goldemberg reference to reinforce examiner's position that using cationic starch to stabilize the active ingredient in a cosmetic composition is well known in the art.

Conclusion

No claims are allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gina C. Yu whose telephone number is 571-272-0635.

Art Unit: 1617

The examiner can normally be reached on Monday through Friday, from 8:30 AM until 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sreeni Padmanabhan can be reached on 571-272-0629. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1234.

Gina Yu
Patent Examiner



SREENI PADMANABHAN
SUPERVISORY PATENT EXAMINER